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ABSTRACT

This paper summarizes the results of the empirical evaluation of the Outward Bound component of the 1987 Career Beginnings Program. Career Beginnings is a national, privately funded program designed to increase the probability that minority high school youth will either attend college or find good jobs following high school graduation. The Outward Bound component consisted of providing 85 Career Beginnings students with full scholarships to wilderness challenge programs ranging in length from 14 to 23 days. The effectiveness of the Outward Bound component was evaluated using a pre/post quasi-experimental design. The control group consisted of 98 Career Beginning students, chosen randomly, who were not interested in attending Outward Bound. Analysis of several instruments and surveys showed that the experimental students were significantly improved over the control group on the following measures: (1) general well being; (2) self-confidence; (3) social consciousness; and (4) sociability. Both groups of students improved on measures of hopelessness and self-deprecation. Neither group changed much on achievement motivation. The results generally support Outward Bound's ability to increase the positive effects of the Career Beginnings Programs. Tables and figures illustrate the statistical data. (Author/VM)

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THE CAREER BEGINNINGS OUTWARD BOUND COMPONENT: AN EMPIRICAL EVALUATION

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November, 1987

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ABSTRACT

This paper summarizes the results of the empirical evaluation of the Outward Bound component of the 1987 Career Beginnings program. Career Beginnings is a national, privately funded program designed to increase the probability that minority high school youth will either attend college or find good jobs following high school graduation.

The Outward Bound component consisted of providing 85 Career Beginnings students with full scholarships to wilderness challenge programs ranging in length from 14 to 23 days. The effectiveness of the Outward Bound component was evaluated using a pre/post quasi-experimental design. The control group consisted of 98 Career Beginnings students, chosen randomly, who were <u>not</u> interested in attending Outward Bound.

Data was collected by administering the Self-Report Survey (SRS), an instrument with six subscales designed to detect the changes which commonly occur secondary to Outward Bound. 67 experimental subjects and 68 control subjects completed both pre and posttesting.

Data analysis using repeated measures analysis of variance revealed that the experimental students were significantly improved ($p < .05$) over the control group on the total scale score, General Well Being, and on three subscales: Self-Confidence, Social Consciousness, and Sociability. Both control and experimental students significantly improved on two other scales--Hopelessness and Self-Deprecation--but neither group was superior to the other. Neither group changed significantly on the final subscale, Achievement Motivation.

The results of the evaluation are discussed and it is concluded that the findings generally support Outward Bound's ability to increase the positive effects of the Career Beginnings program.

This paper summarizes the results of the empirical evaluation of the Outward Bound component of the 1987 Career Beginnings Program. Career Beginnings is a one-year-long national program designed to increase the probability that tenacious minority youth will either get good jobs or attend college after high school. These students are described as "tenacious" in that they have good school attendance records, are free from significant psychological or behavioral problems, and achieve average to slightly above-average grades. The program attempts to reach promising minority youth who, if they had been born into a middle class family, would have had an excellent chance at achieving economically successful careers.

The Career Beginnings program starts at the end of the junior year in high school. Following recruitment and orientation, each participant is given a mentor, who is an established business person, to serve as a model and to help them through the program. The heart of Career Beginnings is a summer internship or job, often in a white collar position in a large organization or corporation. After completion of the internship, the mentor relationship is continued through the participant's senior year in high school. In addition to the mentor relationship and the summer internship, the participants also attend regular Career Beginnings program meetings. If a participant needs any special help--e.g., vocational or academic counseling or tutoring--the Career Beginnings staff will attempt to facilitate that assistance using a support network-type approach. In 1987, the Career Beginnings program operated in 22 cities across the country and enrolled 2200 participants.

In the Spring of 1987, the Commonwealth Foundation, one of the principal funders of the Career Beginnings Project, asked Outward Bound USA to reserve 100 places on summer wilderness courses for Career Beginnings students. The students were to come from eight different Career Beginnings program sites. The Commonwealth Foundation and Career Beginnings staff expected that the effects of the Outward Bound course would increase the positive impact of the standard Career Beginnings program.

In order to test this assumption, the Commonwealth Foundation asked Outward Bound USA to conduct an empirical evaluation project. This report summarizes the results of that evaluation.

RESEARCH DESIGN

The evaluation was originally intended to be a true experimental design with candidates for the Outward Bound scholarships randomly assigned into control and experimental conditions. Unfortunately, in place of the 200 candidates needed for such a design, slightly less than 100 Career Beginnings students signed up for Outward Bound.

This lack of subjects forced the research to use a quasi-experimental design where an experimental group of 100 Outward Bound Career Beginnings students

were compared with 100 Career Beginnings students, chosen at random, who had not indicated an interest in attending Outward Bound. The equivalency of the control and experimental groups is discussed in further detail under "Subjects" below.

In order to minimize cost and inconvenience, assessments of the students' functioning was limited to pre/post Outward Bound course measurement with one self-report questionnaire, the Self-Report Survey (SRS). The SRS is described in detail below in the "Instrumentation" section.

Statistical tests were conducted to assess whether the control and experimental groups differed before and after the Outward Bound course. In addition, the pre/post Outward Bound scores on the SRS of a group of Caucasian, middle class scholarship students were included in parts of the data analysis to provide an interesting contrast with the Career Beginnings students.

Subjects

Career Beginnings students at the eight sites were informed of their opportunity to attend an Outward Bound program as scholarship students. The scholarship provided tuition, transportation, and an equipment subsidy. Interested students and their parents were invited to an evening presentation about Outward Bound and were asked to participate in a one-day ropes course orientation day. If they were still interested, they were given a scholarship to Outward Bound.

At the end of the orientation phase, there were fewer than 100 Career Beginnings students signed up for Outward Bound. In addition, some students changed their minds about attending Outward Bound and others were rejected for medical reasons. As a result of this shortage of interested students, an ongoing recruitment effort for the Outward Bound scholarships was conducted through the first two months of the summer of 1987. This recruitment effort resulted in 85 students actually going to Outward Bound. 10 of these students did not complete their entire Outward Bound course for medical or motivational reasons. As a result, the final size of the experimental group was 75.

The control group was formed by randomly choosing subjects from the population of Career Beginnings students who were not interested in attending Outward Bound. At pretesting there were 96 students in the control group.

A third group of subjects was included in the study in order to provide an estimate of the typical impact of Outward Bound on middle class Caucasian students. This "standard" group consisted of 29 scholarship students from Cooperstown Central High School in Cooperstown, NY. The Cooperstown students were also recipients of full scholarships plus travel and were selected in much the same way as the Career Beginnings scholarship students--that is, the Cooperstown scholarship program was able to send almost all of the students who wished to go to Outward Bound.

The credibility of a quasi-experimental design rests on its ability to argue that the control and experimental groups are essentially equivalent. In this experiment, the obvious problem with equivalency is the fact that the experimental students were interested in taking Outward Bound and the control students were not. Given that Outward Bound is usually associated with risk-taking and adventure,

one can postulate that people who are willing to expose themselves to such an environment are significantly different than those who are unwilling.

While it is impossible to disprove such a postulate, its negative implications can be weakened by examining the pre test data collected from the experimental and control groups. If they are similar, then it can be argued that willingness to attend Outward Bound may not have destroyed the groups' equivalency.

Table 1 presents the demographic information on the three groups. Note that the Career Beginnings groups appear to be highly similar; however, the Cooperstown group, as expected, is quite different particularly in the areas of age and race.

Table 1:
Demographic Information

	Control			Experimental			Standard		
	N	%	mean	N	%	mean	N	%	mean
Age	68		16.9	67		16.9	29		15.8
Years of School	68		11	67		11	29		10.2
Sex									
Male	36	53%		36	54%		18	62%	
Female	32	47%		31	46%		11	38%	
Race									
Asian	8	12%		11	16%				
Black	38	56%		41	60%				
Hispanic	15	22%		10	15%				
White							29	100%	
Indian	3	5%		2	3%				
Other	3	5%		1	1%				
No Ans.				3	5%				

Table 2 presents the pre-Outward Bound SRS scores for the control and experimental groups. These means were tested statistically using the T-Test for independent samples. Reviewing the T-Test statistics reveals that none of the pre-Outward Bound SRS score differences were statistically significant.

Table 2:
Pretest SRS Scale Scores

	Mean Score Control	Mean Score Experimental	t value	Prob.
Self-Dep.	2.92	2.90	-.18	.855
Hopeless	3.01	2.87	-1.48	.141
Achieve	4.15	4.24	.98	.331
Social Cons.	3.76	3.82	.73	.468
Sociability	3.83	3.86	.35	.730
Self-Conf.	4.29	4.31	.22	.828

In summary, while there are potentially grave problems with arguing the equivalency of the control and experimental groups given their differential willingness to attend Outward Bound, an analysis of the demographic data and the SRS data does not reveal any significant disparities between the two groups.

Instrumentation

The SRS is a self-report instrument recently developed by Professor G. Christian Jernstedt of Dartmouth College. Professor Jernstedt (personal communication, March, 1987) described the instrument's evolution as follows.

The SRS was specifically developed to measure the psychosocial changes which occur secondary to Outward Bound. Test development began by reviewing the Outward Bound literature and interviewing numerous Outward Bound staff to determine what changes are commonly experienced by students. Once the expected changes were identified, scales were located and/or developed to assess those changes.

This process resulted in a very large

instrument incorporating approximately 40 different scales. Since such an instrument was unwieldy to administer, it was simplified by taking the items (up to four) from each scale which best predicted the response to the total scale. This resulted in a much shorter form; however, it also resulted in approximately 40 scales with unacceptable reliability coefficients.

In order to form more reliable scales, this shorter form was factor analyzed and six orthogonal scales, accounting for the majority of the variance in the total form, were created. The names, definitions, and reliabilities (alpha) of each subscale are listed below.

*1) **Self-Deprecation**: A high score on this variable indicates that the subject has a low self-concept. S/he is worried that others think poorly of him/her and thus seeks the approval of others. This person lacks a sense of self-worth and believes that their basic abilities are below average. Alpha reliability equals .85.*

*2) **Sociability**: A high score on this variable indicates that the subject has good social skills and relates easily to others. Alpha reliability equals .81.*

*3) **Achievement Motivation**: A high score on this variable indicates that the subject is a hard worker. Additionally, they will tend to persevere in the face of difficulties and value a job well done. Alpha reliability equals .84.*

*4) **Social Consciousness**: A high score on this variable indicates that the subject has a concern for and feels connected to others. A high score would also indicate that the individual believes in working for a better world. Alpha reliability equals .61.*

*5) **Hopelessness/Social Pessimism**: A high score on this variable indicates that the subject has a pessimistic perspective on the future and believes that personal effort cannot halt society's inexorable slide toward decay and inequity. Conversely, a low score indicates that the individual feels able to influence the social process in a positive way. Alpha reliability equals .68.*

*6) **Self-Confidence**: A high score on this variable indicates that the subject is self-confident, self-accepting and has positive self-esteem. Alpha reliability equals .77.*

In addition to the subscales above, a total scale, called "General Well Being" was also developed. General Well Being is simply the linear sum of the six subscales with Hopelessness and Self-Deprecation being scored in a negative direction.

Data Collection Procedures

All data collection occurred at the eight Career Beginnings sites. An effort was made to collect the data as close to the beginning and the end of the Outward Bound course as possible to minimize the influence of extraneous factors on the results. Most SRS administrations occurred during group meetings of the Career Beginnings program although in a few instances the SRS was given individually.

Pre-Outward Bound testing occurred as early as 15 days before the course and as late as 3 days pre-course. Post-Outward Bound testing occurred over a slightly wider range from 1 week post-course to 6 weeks post-course although almost all subjects took the test within 3 weeks of returning.

Originally there were 96 students in the control group and 85 students in the experimental group. For purposes of statistical analysis, only students who completed both pre and post testing could be included in the experiment. In addition,

experimental students who did not complete their Outward Bound course were excluded from the analysis. 67 experimental students and 68 control students completed all testing. This results in subject mortality rates of 20% for the experimental subjects and 29% for the control subjects.

RESULTS

The data were analyzed using a repeated measures analysis of variance procedure provided by SPSSPC+. This procedure tests three effects for statistical significance: GROUP, TIME, and the TIME BY GROUP INTERACTION.

"Statistical significance" estimates the probability that the difference between two means could have occurred by chance. If the mean scores are similar, it is quite likely that their difference could have occurred accidentally and have little experimental meaning. For example, on the T-Test data presented earlier in the "Subjects" section, the probability--or "p"--of the difference in mean scores occurring via chance ranged from low of p=.14 (fourteen chances in a hundred) to a high of p=.86 (eighty six chances in a hundred). Since these probabilities are high, it is assumed that the differences between group scores is random and meaningless. The scores of the two groups are not different in a statistically significant manner.

How low does the probability need to be to achieve statistical significance? There is no absolute answer to this question but social scientists have adopted a convention of using .05 as the criteria for statistical significance. In other words, if the difference in the average scores of two groups is large enough that it could only have occurred by chance one time in twenty or less, then it is inferred that the differences are purposeful instead of random.

For example, looking at Table 3 on page 9, one finds three probabilities less than .05: .03, .000, and .02. All of those are considered statistically significant; each of those probabilities implies that something--e.g., the Outward Bound course--was affecting the students' scores in a nonrandom manner.

Once statistical significance is grasped, it remains to understand the factors being tested: GROUP, TIME, and the TIME BY GROUP INTERACTION (TBGI). GROUP is a factor which measures whether one group is always different than another, whether it is always higher or lower than another. In Table 3A, the effect of GROUP is statistically significant at the p=.03 level; the experimental group tends to be higher than the control group throughout the course of the research.

The TIME effect works quite differently; it compares all of the pretest scores with all of the posttest scores regardless of group membership. The statistical significance of p=.000 for TIME seen in Table 3B means that all of the students' scores, whether they were in the control or experimental group, went up significantly over time.

The final effect, TBGI, is the most interesting for this research. It measures whether the students changed more because they were in a certain group. In other words, it determines whether the Outward Bound course had a significant effect. Examining Table 3B once again, one sees that the TBGI effect had a statistically significant probability of .02. Participation in an Outward Bound program did make a differ-

ence for these students.

Note that the interaction effect, TBGI, often tends to account for the significance of the TIME and GROUP main effects. For example, Figure 1 clearly indicates that the largest change was in the posttest means of the experimental group. This increase in scores is largely responsible for the significance of both the main effects, TIME and GROUP. It is common in such cases to ignore the significance of the main effects since they have little meaning for the experiment.

The total SRS score (General Well Being) and each subscale score are each represented by a graph (Figures 1 through 7). The possible range of each scale was from 1 to 5 with the exception of General Well Being which could range from -6 to 18. Below each graph are two tables which summarize the results of the repeated measures analysis of variance.

The figures not only include the pre/post scores for the control and experimental groups, they also show a line representing the pre/post scores of the standard group of Cooperstown Central High School scholarship students. While the standard scores appear on the figures for comparison purposes, the Cooperstown scores were not included in the statistical analysis. The critical question for this research study is whether Career Beginnings students who attend Outward Bound change more than their peers. Comparing their outcomes to Caucasian scholarship students is interesting but not central to this study. And including a third group in the analysis of the control and experimental groups could minimize statistical sensitivity and mask real effects. To repeat: the Cooperstown scores are only included to provide normative data. They are not included in the statistical analysis.

Figure 1: Mean SRS Scores on General Well Being

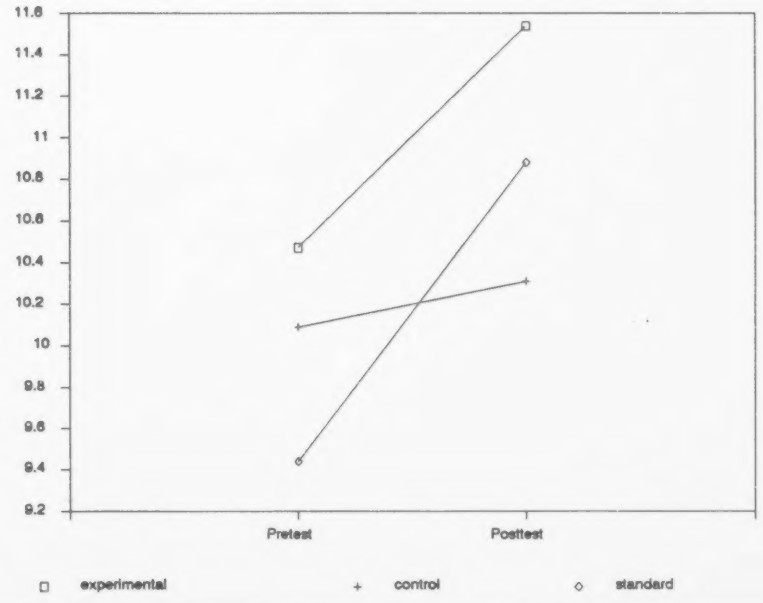

Table 3A: F-table (between) for GENERAL WELL BEING

Source	SS	DF	MS	F	Prob
Error	1197.05	133	9.0		
GROUP	43.23	1	43.23	4.8	.03

Table 3B: F-table (within) for GENERAL WELL BEING

Source	SS	DF	MS	F	Prob
Error	260.69	133	2.19		
TIME	28.00	1	28.00	12.81	.000
TBGI	12.21	1	12.21	5.59	.020

General Well Being

Examining Figure 1 reveals that both the experimental and the control groups improved on the variable, General Well Being, but that the improvement in the experimental group was much more marked. The standard group also rose sharply. Looking at Tables 3A and 3B, the effects of GROUP, TIME and TBGI were all statistically significant; however, the GROUP and TIME effects are not important as they occur secondary to the interaction effect.

Figure 2: Mean SRS Scores on Self-Confidence

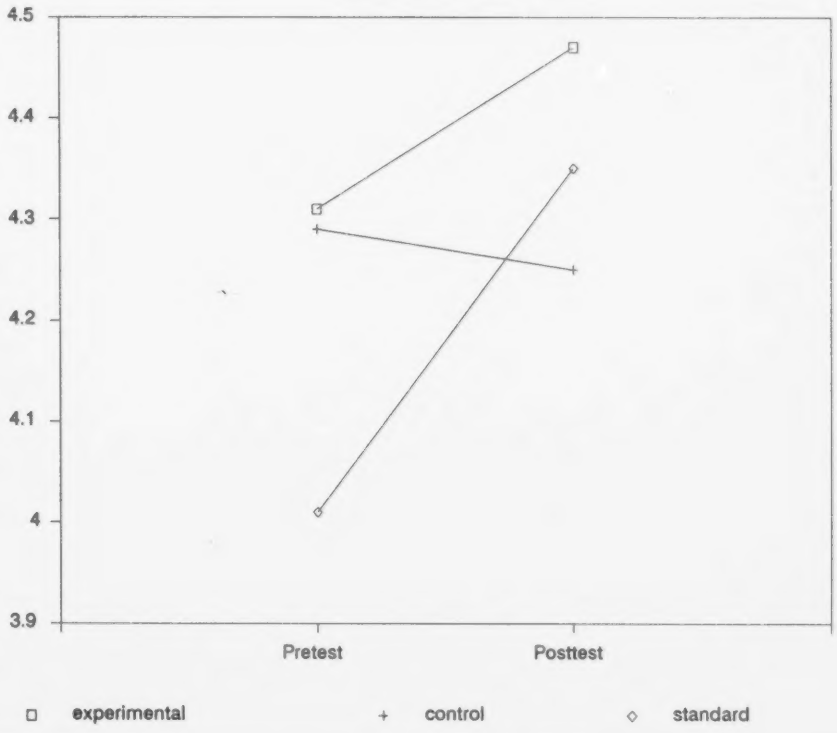

Table 4A: F-table (between) for SELF-CONFIDENCE

Source	SS	DF	MS	F	Prob
Error	49.43	133	.37		
GROUP	.98	1	.98	2.63	.107

Table 4B: F-table (within) for SELF-CONFIDENCE

Source	SS	DF	MS	F	Prob
Error	15.13	133	.11		
TIME	.19	1	.19	1.68	.197
TBGI	.69	1	.69	6.05	.015

Self-Confidence

Examining Figure 2 reveals a rise in Self-confidence scores for both the experimental and standard group and a slight drop on this variable for the control group. Tables 4A and 4B show that only the TBGI effect is statistically significant.

Figure 3: Mean SRS Scores on Social Consciousness

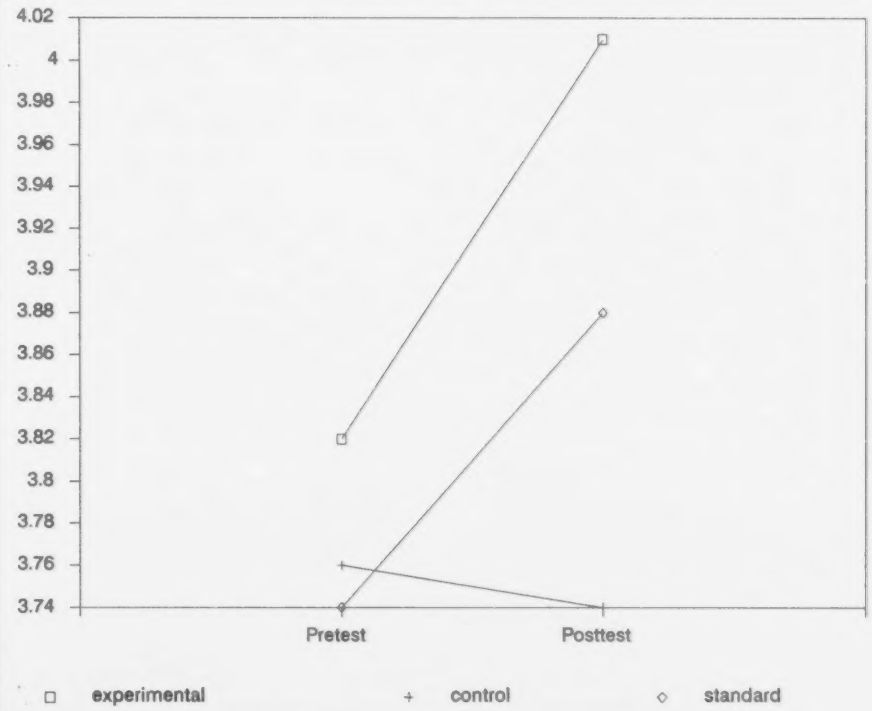

Table 5A: F-table (between) for SOCIAL CONSCIOUSNESS

Source	SS	DF	MS	F	Prob
Error	43.34	133	.33		
GROUP	1.78	1	1.78	5.47	.021

Table 5B: F-table (within) for SOCIAL CONSCIOUSNESS

Source	SS	DF	MS	F	Prob
Error	18.43	133	.14		
TIME	.47	1	.47	3.37	.069
TBGI	.67	1	.67	4.85	.029

Social Consciousness

Figure 3 shows a sharp rise on the social consciousness variable for both the experimental and standard groups while the control group remained virtually unchanged. The F-Tables in Figures 5A and 5B show that both the GROUP and TBGI effects are significant. However, the GROUP effect is simply a by-product of the TBGI effect.

Figure 4: Mean SRS Scores on Achievement Motivation

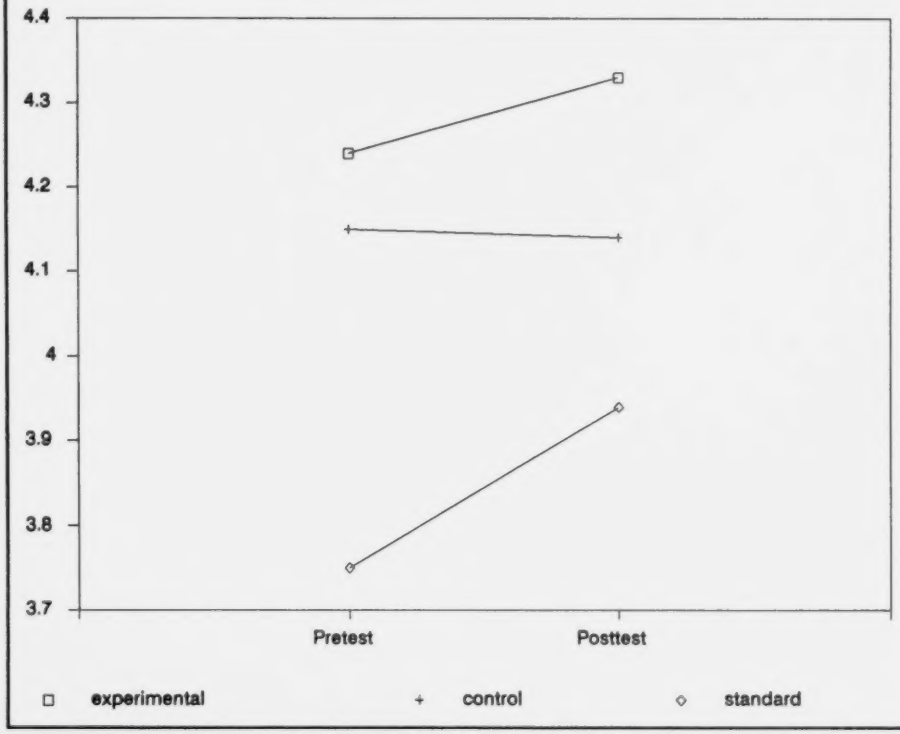

Table 6A: F-table (between) for ACHIEVEMENT MOTIVATION

Source	SS	DF	MS	F	Prob
Error	53.50	133	.40		
GROUP	1.31	1	1.31	3.26	.073

Table 6B: F-table (within) for ACHIEVEMENT MOTIVATION

Source	SS	DF	MS	F	Prob
Error	19.70	133	.15		
TIME	.14	1	.14	.96	.328
TBGI	.17	1	.17	1.14	.288

Achievement Motivation

Examining Figure 4 shows that the control group was virtually unchanged in terms of Achievement Motivation and the experimental and standard groups rose slightly. Tables 6A and 6B reveal that none of the effects were strong enough to achieve statistical significance.

Figure 5: Mean SRS Scores on Sociability

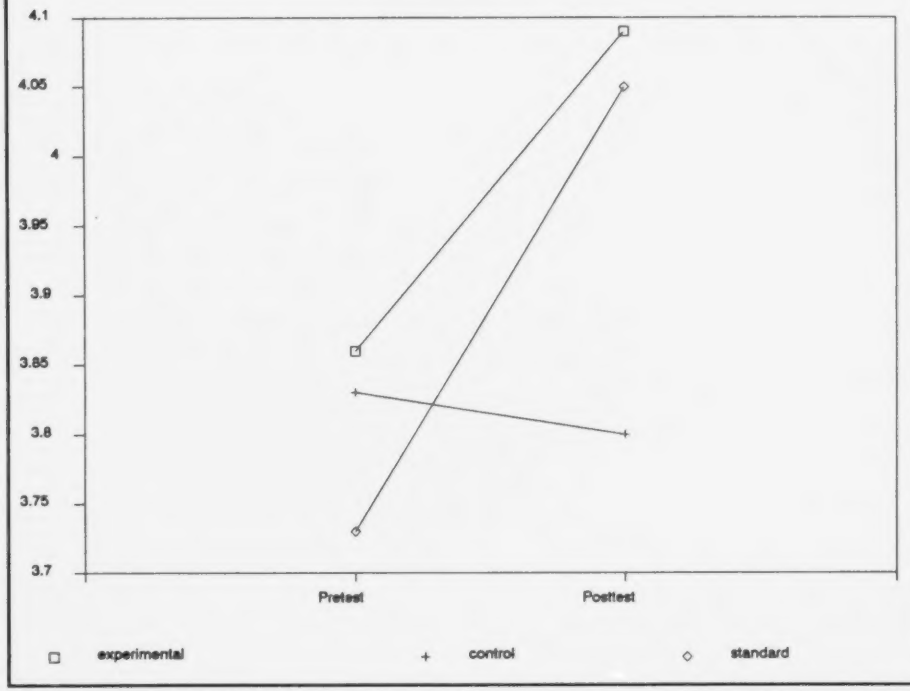

Table 7A: F-table (between) for SOCIABILITY

Source	SS	DF	MS	F	Prob
Error	72.10	133	.54		
GROUP	1.83	1	1.83	3.37	.068

Table 7B: F-table (within) for SOCIABILITY

Source	SS	DF	MS	F	Prob
Error	14.23	133	.11		
TIME	.63	1	.63	5.87	.017
TBGI	1.14	1	1.14	10.62	.001

Sociability

Figure 5 shows that the experimental and standard groups increased sharply in terms of their Sociability scores while the control group declined somewhat. Tables 7A and 7B reveal that both the TIME and TBGI effects achieved significance. However, the TIME effect occurred secondary to the TBGI effect and has no independent meaning.

Figure 6: Mean SRS Scores on Self-Deprecation

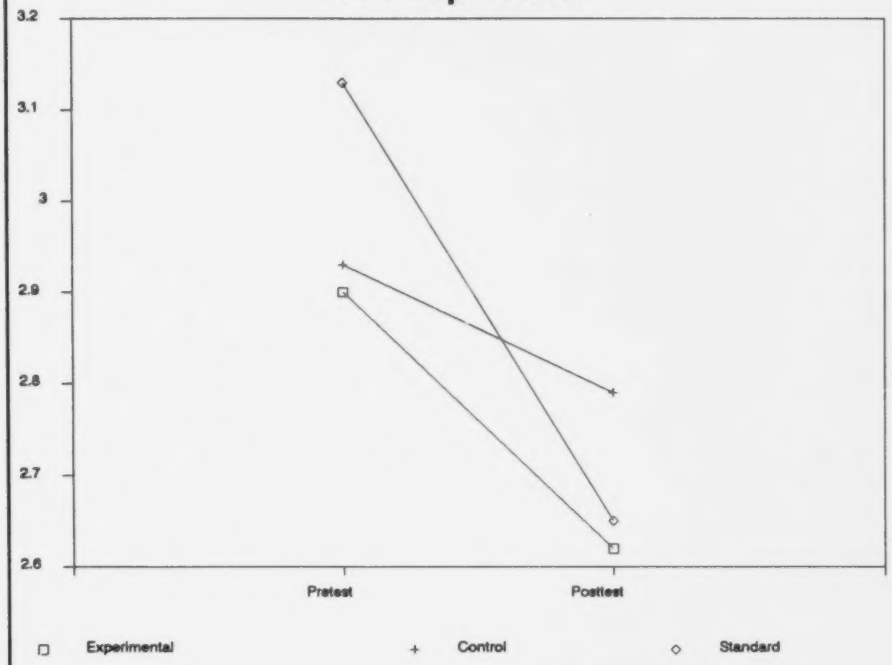

Table 8A: F-table (between) for SELF-DEPRECATION

Source	SS	DF	MS	F	Prob
Error	142.56	133	1.07		
GROUP	.66	1	.66	.61	.434

Table 8B: F-table (within) for SELF-DEPRECATION

Source	SS	DF	MS	F	Prob
Error	36.63	133	.28		
TIME	2.87	1	2.87	10.44	.002
TBGI	.35	1	.35	1.28	.261

Self-Deprecation

Figure 6 shows that all groups declined on self-deprecation with the sharpest decline occurring for the standard group, a moderate decline occurring for the experimental group, and a slight decline occurring for the control group. Tables 8A and 8B reveal that only one effect was significant: TIME. Although the experimental group changed more than the control group, the difference was not strong enough to reach significance.

Figure 7: Mean SRS Scores on Hopelessness

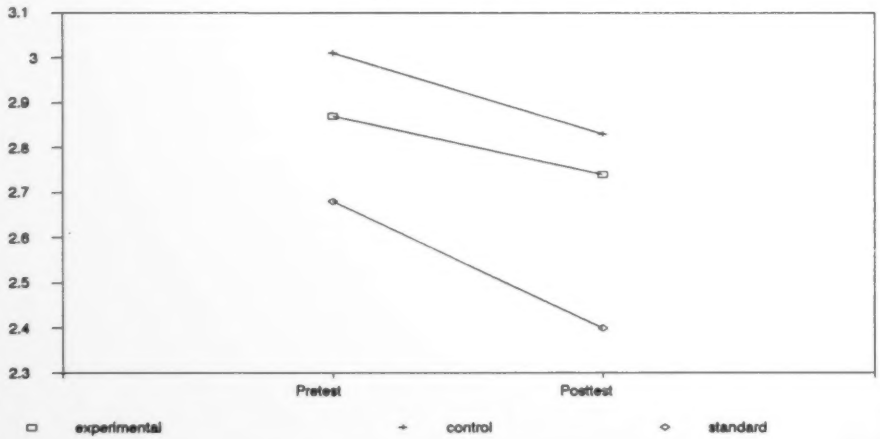

Table 9A: F-table (between) for HOPELESSNESS

Source	SS	DF	MS	F	Prob
Error	66.50	133	.50		
GROUP	.89	1	.89	1.77	.185

Table 9B: F-table (within) for HOPELESSNESS

Source	SS	DF	MS	F	Prob
Error	27.31	133	.21		
TIME	1.70	1	1.70	8.30	.005
TBGI	.05	1	.05	.24	.622

Hopelessness

Figure 7 shows that all three groups declined on the Hopelessness scale with the standard group declining sharply and the control and experimental group declining slightly. Tables 9A and 9B reveal that only the TIME effect was significant, indicating that all students were less hopeless at post-testing. Although there appears to be a fairly large visual gap between the Hopelessness scores of the experimental and control groups, the differences were not large enough to achieve significance.

Summary of Results

The experimental students were significantly improved over the control students in four variables: General Well Being, Self-Confidence, Social Consciousness, and Sociability. On two other scales--Hopelessness and Self-Deprecation--both groups were significantly different at posttesting but neither group was superior to the other. On the last scale, Achievement Motivation, neither group showed any significant change.

DISCUSSION

The basic hypothesis of the evaluation--that the Outward Bound component of the Career Beginnings program would increase the effectiveness of the program--was generally supported by the research results. On three of the six subscales, and on the total scale, the experimental group significantly outperformed the control group. Moreover, on two of the three scales which did not achieve significance, the experimental group did better than the control group; however, the p=.05 level was not reached.

The results appeared to be primarily influenced by three factors: the nature of Outward Bound, the impact of the summer work experience, and the ethnicity of the Career Beginnings participants. The Outward Bound curriculum tends to emphasize two factors: building confidence and building teams. It is not surprising, therefore, that on the scales oriented towards confidence and social factors, the Outward Bound participants surpassed their control group peers. Furthermore, these differences are particularly believable if one compares the Outward Bound and summer internship experiences. The summer internship program was most different than Outward Bound in the social area; it lacked the intense interpersonal impact of being impelled into demanding situations which require team members to help and trust each other. And, of course, regardless of the personal empowerment aspect of the internship program, it did not include the self-confidence building effects of mastering wilderness challenges which are perceived as adventurous or even life-threatening.

Outward Bound typically achieves an increase in Achievement Motivation. Although there were improvements on this scale, they were not large enough to attain significance. One possible explanation is that the summer internship had been so effective in this area that the students' achievement motivation was already enhanced; there was little room for further increase. This theory is especially appealing in that the summer work experience was expressly designed to achieve the goals measured by the Achievement Motivation Scale: the ability to work hard, to keep going in the face of problems, and to expect a great deal from oneself.

On the Hopelessness and Self-Deprecation subscales, the Outward Bound students, although they were significantly improved over their own pretest scores, failed to outperform the control group. It is possible that the lack of superiority on the Hopelessness Scale occurred because it is quite sensitive to an individual's sense of social hopefulness: their belief that individual and political actions can change the fabric of society. Given the fact that some level of social hopelessness is a realistic view of the world for most minority persons, and that the Outward Bound program does not explicitly attempt to address this issue, it is not that surprising that the experimental group did not achieve significantly greater gains than the control group.

The Self-Deprecation findings are more difficult to interpret. One possible explanation is related to the fact that the Self-Deprecation Scale is sensitive to psychopathology. Neither the control nor the experimental groups has much psychopathology. Perhaps the improvements on this scale by both groups simply represent the mild antipathological effects found when

people are exposed to positive environments with neither environment--Outward Bound or the summer internship program--having a particularly strong effect.

While this study has carefully avoided directly comparing the results of the standard group of Cooperstown High School students with the Career Beginnings results, the obvious differences between the groups on almost every scale are both interesting and provocative. Two factors are most striking: first, the Cooperstown students appeared to gain more than the experimental students on most of the scales and second, the Cooperstown students scored lower at pre testing, and often on posttesting, than the Career Beginnings students.

This first finding, that Caucasian scholarship students appear to respond more positively to Outward Bound than minority scholarship students, will soon be assessed in a separate article. However, prior to this more rigorous analysis, one can still list some factors which might explain the disparity.

1) Outward Bound has been described as a white, middle class rite of passage. Perhaps the Cooperstown students improved more because the Outward Bound program is implicitly more rewarding or reinforcing to white, middle-class students.

2) Perhaps the Outward Bound staff are more comfortable or more experienced in working with middle class students and can be more effective with them.

3) Perhaps the home environments, life experiences, or innate abilities of the minority students have limited their capacity to gain as much from an Outward Bound

4) Younger Outward Bound students sometimes improve more than older students. Perhaps the fact that the mean age of the Cooperstown students was one year younger accounts for the differences.

There are other possibilities as well; these three simply raise some of the more salient explanations.

The second striking result, the fact that the Cooperstown students tended to score lower on almost all the scales, is also a fascinating finding. To begin, it should be emphasized that the SRS scales do not measure the absolute amount of a certain quality. For example, the fact that the Career Beginnings students scored higher on the Self-Confidence Scale than the Cooperstown students does not mean that they are actually are more self-confident; it might simply mean that the Career Beginnings students report that they are more confident. If the subculture of the Career Beginnings students was more supportive about making self-confident statements than the subculture of the Cooperstown students, then one would expect the average Career Beginnings student to score higher than the average Cooperstown student.

Given the large disparity in subcultures between the two groups, it seems most likely that this is the explanation for most of the differences in pretest scale scores. This theory is further supported by the fact that the one scale where the pretest scores of the Cooperstown students were in a more positive direction than the Career Beginning scores was Hopelessness. As discussed above, this scale partially measures the individual's belief that he can get ahead in society. Clearly, the subcultural norms on this scale would be significantly different between the two group of students.

While differing subcultural norms almost certainly account for the majority of the pretest score variance, two other factors

may also contribute. The Cooperstown students were a bit younger than the Career Beginnings students. Adolescents' scores on psychological variables tend to become more positive as they get older. Second, it is possible that all of the Career Beginnings students were basking in the glow created by their summer internship experience; perhaps their high scores represented real gains achieved through the Career Beginnings program.

This section cannot be concluded without reemphasizing the caveat about quasi-experimental designs. Clearly, the validity of this study is at risk in terms of the possible inequivalency of the control and experimental groups although it was reassuring to discover that there were no significant differences on any of the pretest scale scores or demographic patterns.

RECOMMENDATIONS

This study has two major flaws, both of which were a result of the short lead time prior to the evaluation and the small research budget: 1) there was no follow-up and 2) the data collection was limited to one self-report measure and did not include, for example, behavioral or collateral-report measures. Further research in this area would benefit from redressing both of these flaws.

The findings of the study raise a number of interesting questions which this report has not addressed. The most significant of these, as discussed above, is the discrepancy in gains between the group of Caucasian scholarship students and the minority scholarship students. This topic will be addressed in a subsequent study.

Another interesting finding, one that has not been mentioned before, is related to the fact that some of the Career Beginnings students attended Outward Bound in homogeneous patrols consisting of all Career Beginnings students and other students were mixed in with regular Outward Bound students. Significantly, all 11 of the Career Beginnings students who withdrew from their Outward Bound courses were from the heterogeneous patrols. A study examining differences in outcome between the heterogeneous and homogeneous groups is scheduled for the future. In addition, the dropouts' pretest and demographic data will be analyzed to determine whether there were any salient factors which predicted their withdrawal.

CONCLUSION

This study was primarily designed to answer one question: did the Outward Bound experience significantly enhance the self-reported psychological functioning of Career Beginnings students. The data support an affirmative response to that question; the experimental students out performed the control students significantly on three out of six subscales and on the total scale score.

Of course these positive findings do not prove that the changes will last over time; nor do they guarantee that improved scores on self-report scales will translate into improved behaviors in the students' daily lives. However, numerous anecdotes and the Outward Bound empirical literature (c.f., Burton, 1981; Marsh, Richards & Barnes, 1986; and Bacon, Kimble & Taylor, in press) suggest that many of these improvements will be long lived and that the changes will become manifest as concrete behavioral improvements. In conclusion, the Outward Bound program appeared to perform as predicted and the students seem to have gotten a great deal out of attending the wilderness challenge courses.

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